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NSWC Crane

“Harnessing the Power of Technology for the Warfighter”

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National Defense Industrial Association - NDIA

2003 Joint Services Small Arms Annual Symposium, Exhibition,

MK 262 MOD 0

- **NOMENCLATURE:** Cartridge, Caliber, 5.56MM, Special Ball, Long Range, MK 262 MOD 0
  - **DODIC:** AA53
  - **NSN:** 1305-10-497-9996

MK 262 MOD 0 Point of Contact

NSWC Crane, Code 4083 Ammunition Branch

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- **Chuck Marsh – Sr. Project Tech: DSN 482-4110, Email: marsh_c@crane.navy.mil**

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M855 5.56 MM BALL CTG.

- Initially designed for M249 SAW (Machine-gun); very broad specification. Allows for broad lot to lot performance variation and poor accuracy.
- Designed to defeat well equipped, Soviet type threat, at distances of 300-500 meters, fired from a 20” barreled M16.
- M855 does very well when used against the type of threat is was designed to defeat.
- M855 does not consistently do well against thin, non -armored threats at close range when fired from the M4A1 carbine.

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- **PURPOSE:** Specifically developed for use in the MK 12 SPR
- **BACKGROUND:**
  - 27 different Off-the-shelf cartridges tested, down selected to three, (73 gr. Berger, 87 gr. PRL, and 77gr. Sierra)
  - Berger sold and moved facilities, causing manufacturing reliability issues, PRL shut down, leaving Sierra
  - Navy, Army and USMC match teams used initial COTS load

    with success

MK 262 MOD 0

- **BACKGROUND (CONT)**

  - **SEPTEMBER 11, 2001- Events lead to Emergency Combat Mission Need Statement for SPR's and ammo.**
  - **Reports from SOF operators of M855 being ineffective, specifically in CQB operations.**
  - **Ordnance Gelatin tests show improvements in depth of initial yaw and consistency over the M855 cartridge**
  - **Work began for incorporation of Mil-SPEC primer and cartridge case, packaging and specification.**
  - **Initial SPR weapons and AA53 field reports very**

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- **AA53 PERFORMANCE:**
  - **Sub minute of angle accuracy**
  - **Consistent Initial Yaw in soft tissue between 3-4 inches at ranges from 15’ to 300 meters**
  - **Enables engagements out to 600 meters (800 possible depending on conditions)**
  - **Greatly enhances the capability of the M16 or M4A1 Carbine (2 minute of angle accuracy very realistic, vs 3-5 minute of angle with M855)**

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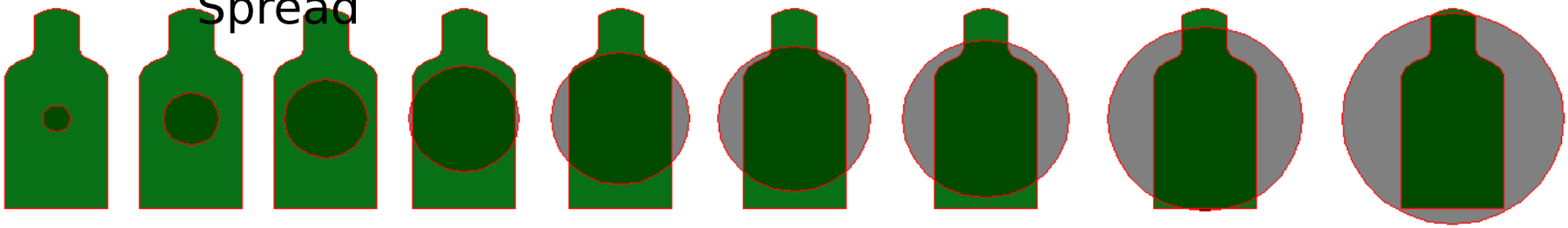
M16/M4 & M855 vs. MK 12 SPR & AA53 (ESTIMATED DATA)

M16A2 & M855 10-Round Shot Group Extreme Spread



100 200 300 400 500 550 600 700 800

Meters

MK 12 SPR & AA53 10-Round Shot Group Extreme Spread

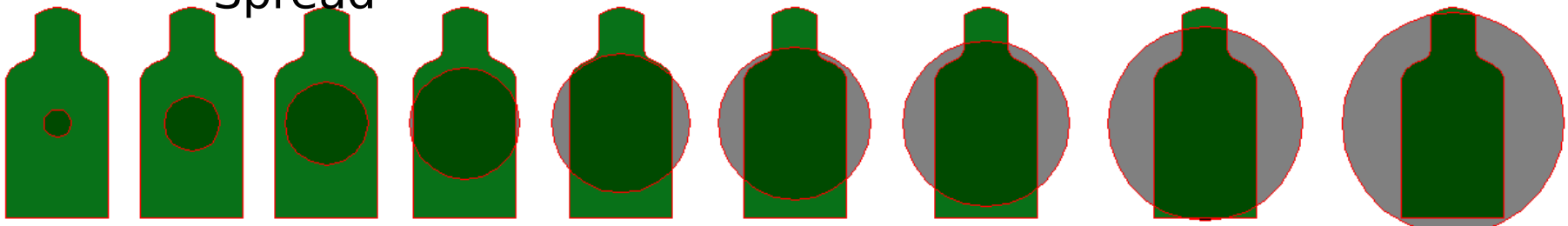
100 200 300 400 500 550 600 700 800

Meters

Head Shot at 600m, Body Shot at 800m Clear Calm Day

M16/M4 & M855 vs. M4A1/ACOG & AA53

M16A2 & M855 10-Round Shot Group Extreme Spread



100 200 300 400 500 550 600 700 800

Meters

M4A1/ACOG & AA53 10-Round Shot Group Extreme Spread

100 200 300 400 500 550 600 700 800

Meters

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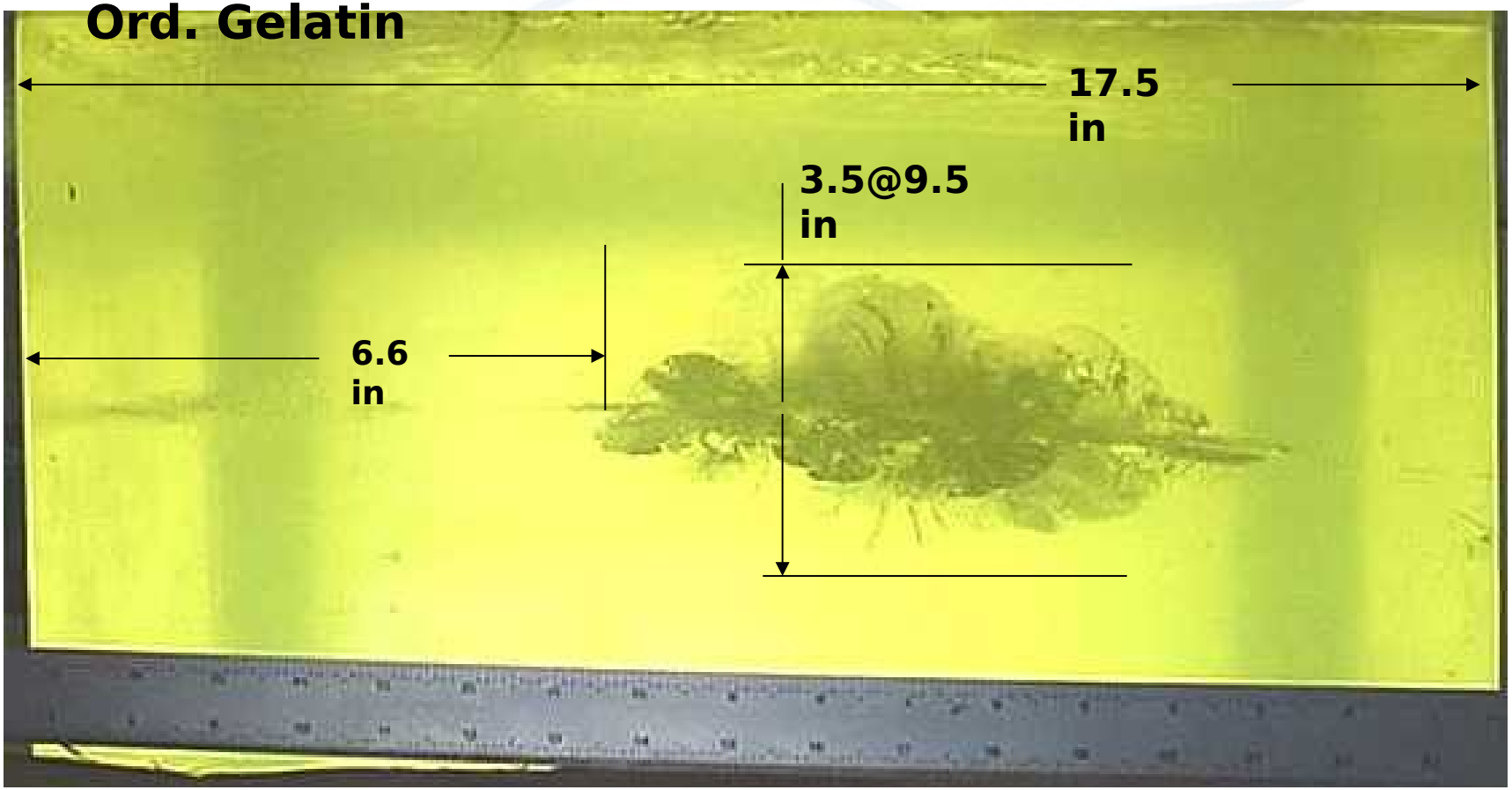
M4A1 & M855 at 50 yds into bare 10% Calibrated Ord. Gelatin



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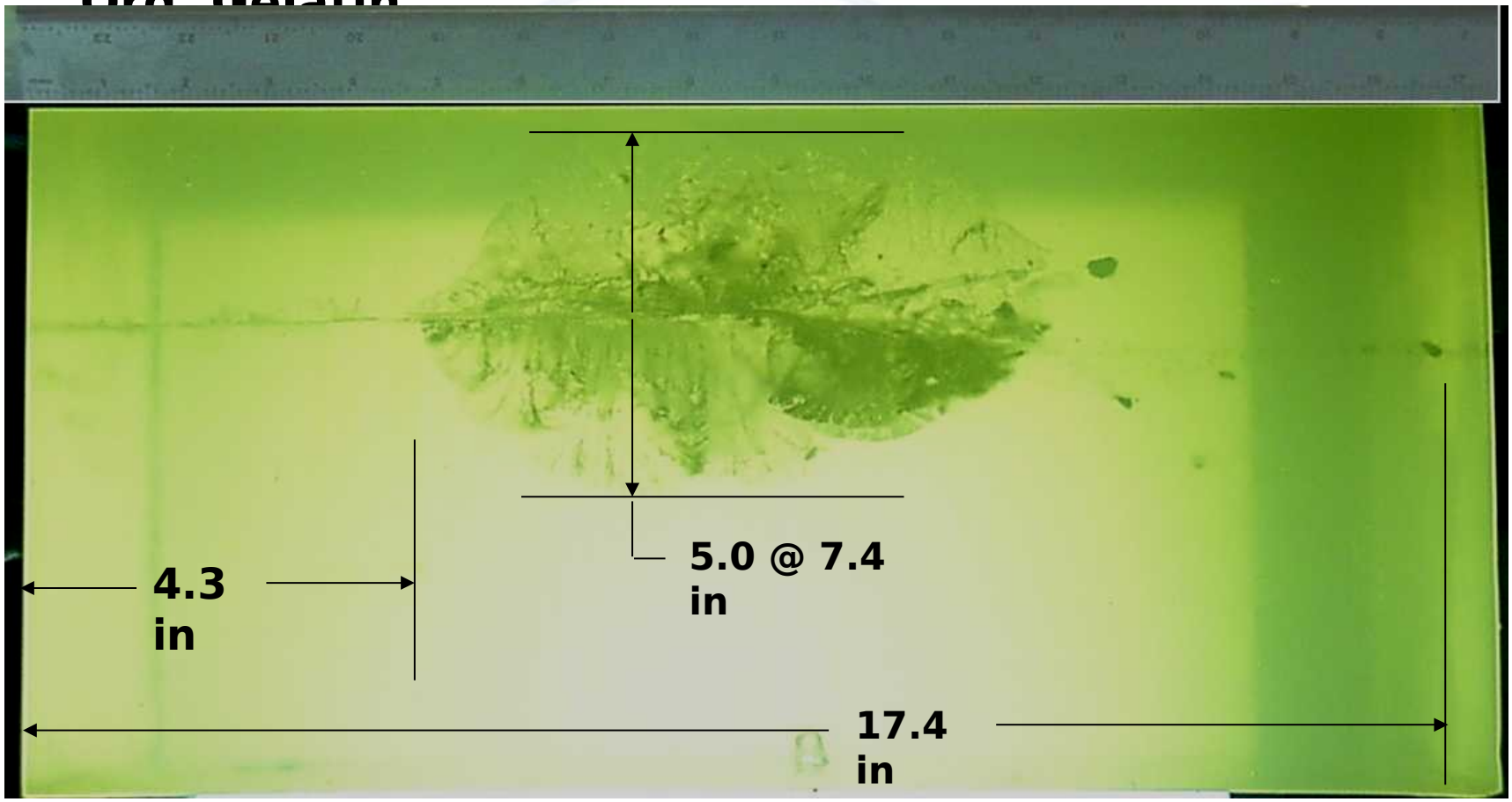
M4A1 & AA53 at 50 yds into bare 10% Calibrated Ord. Gelatin



MK 262 MOD 1

- **DODIC: AA53**
- **NSN: Assignment in process**
- **CANNELURED PROJECTILE**
- **SAME PERFORMANCE SPECIFICATION**
- **CURRENTLY TWO QUALIFIED VENDORS**
- **TERMINAL PERFORMANCE:** Difference between

  MOD 0 and MOD 1 is virtually immeasurable (same).

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Presentation by:
Chuck Buxton, Manager Code 4083,
Ammunition Branch